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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/642,661	08/19/2003	John M. Bedinger	TI-21757.1	3486
23494	7590	01/27/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED			ROMAN, ANGEL	
P O BOX 655474, M/S 3999			ART UNIT	
DALLAS, TX 75265			PAPER NUMBER	
			2812	

DATE MAILED: 01/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/642,661	BEDINGER ET AL.	
	Examiner	Art Unit	
	Angel Roman	2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 35,36,39-41 and 45-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 35,36,39-41 and 45-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 39, 40, 49, 50, 51, 52, 53 and 54 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 39, 40, 49, 50, 51, 52, 53 and 54 depend on cancelled claims 37-38.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
3. Claims 35, 46, 48, 50, 52, 54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
4. Claims 46, 48, 50, 52, 54 recite the limitation "the support" in line 2. There is insufficient antecedent basis for this limitation in the claim.
5. Claim 35 recites the limitation "said membrane" in line 9. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 35, 36, 39, 40, 41, 45, 47, 49, 51 and 53 are rejected under 35 U.S.C. 102(b) as being anticipated by Stupian et al. U.S. Patent 5,543,364A.

Regarding claim 35 Stupian et al. discloses a method of making a package containing a substantially hydrogen-free interior comprising; providing a package having a hollow interior region; providing a hydrogen degradable semiconductor device material 14 within said hollow interior; forming a hydrogen permeable layer 34 onto the surface of said package; then forming a vent 30 through said package from said hollow interior region to the exterior of said package through a membrane 12 to form a hydrogen permeable layer over said vent (see figure 2).

Regarding claim 36 Stupian et al. discloses the permeable layer consisting of Palladium (see column 4, lines 10-13).

Regarding claims 39 and 40, Stupian et al. discloses the device is a gallium arsenide semiconductor (see column 1, line 23).

Regarding claim 41, Stupian et al. discloses placing said package in an environment where the concentration of hydrogen is less than the concentration of hydrogen in said hollow region (see column 4, lines 17-20).

Regarding claims 45, 47, 49, 51 and 53, Stupian et al. discloses forming the hydrogen permeable layer by plating (see column 5, lines 51-54).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. Claims 46, 48, 50, 52 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stupian et al. U.S. Patent 5,543,364A in view of Hierold et al. U.S. Patent 5,760,455 A.

Regarding claims 46, 48, 50, 52 and 54, Stupian et al. is applied as above but lacks anticipation on removing a support on the package by etching the package.

Stupian et al discloses forming a vent 30 by removing part of the package membrane 12 (see figure 2) but lacks anticipation on specifying a material removal process for this

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step. Hierold et al. discloses removing material from a metal cover 15 to form holes using an etching process (see column 4, lines 13-19), therefore, it would have been obvious to a person having ordinary skills in the art at the time the invention was made to use an etching process as discloses in Hierold et al. to form the vent 30 in the primary reference of Stupian et al. in order to prevent structural damage to the membrane 12.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel Roman whose telephone number is (571) 272-1681. The examiner can normally be reached on Monday-Friday 8:00am-5:00pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Lebentritt can be reached on (571) 272-1873. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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January 24, 2005


MICHAEL S. LEBENTRITT
~~PRIMARY EXAMINER~~
SPE 2812